

Foreword

This Special Issue of RAIRO: Theoretical Informatics and Applications is devoted to full versions of selected papers from the conference on Foundations of Software Science and Computation Structures (FOSSACS'04). The conference was held in Barcelona as a part of the federated ETAPS'04 conference. The previous six FOSSACS conferences took place in Lisbon (1998), Amsterdam (1999), Berlin (2000), Genoa (2001), Grenoble (2002) and Warsaw (2003).

FOSSACS conference seeks original papers on foundational research with clear significance to software science. The Programme Committee invited papers on theories and methods to support the analysis, integration, synthesis, transformation, and verification of programs and software systems. In particular, we have identified the following topics: algebraic models; automata and language theory; behavioural equivalences; categorical models; computation processes over discrete and continuous data; infinite state systems; computation structures; logics of programs; modal, spatial, and temporal logics; models of concurrent, reactive, distributed, and mobile systems; process algebras and calculi; semantics of programming languages; software specification and refinement; type systems and type theory.

FOSSACS 2004 attracted over 130 submissions from which programme committee has selected 34. Additionally to these presentations the programme of the conference contained two invited talks:

- Intruder Theories, by Hubert Comon-Lundh, and
- Theories for the Global Ubiquitous Computer, by Robin Milner.

The second of these talks was a joint talk of all ETAPS'04 conferences. The Program Committee of the conference consisted of:

Parosh Aziz Abdulla (Uppsala, Sweden)
Roberto Di Cosmo (Rocquencourt, France)
Anuj Dawar (Cambridge, UK)
Paul Gastin (Paris, France)
Roberto Gorrieri (Bologna, Italy)
Andrew D. Gordon (Cambridge, UK)
Dietrich Kuske (Dresden, Germany)
Ugo Montanari (Pisa, Italy)
Mogens Nielsen (Aarhus, Denmark)
Vincent van Oostrom (Utrecht, Holland)

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Jens Palsberg (Purdue, USA)
Alberto Rubio (Barcelona, Spain)
Davide Sangiorgi (Bologna, Italy)
Vladimiro Sassone (Sussex, UK)
Philippe Schnoebelen (Cachan, France)
Helmut Seidl (Trier, Germany)
Andrzej Tarlecki (Warsaw, Poland)
Thomas Wilke (Kiel, Germany)
Igor Walukiewicz (chair) (Bordeaux, France).

I would like once again to thank them all as well as the authors and speakers at the conference.

This special issue contains full versions of five papers presented at the conference. These papers not only fill in the details omitted in proceedings versions but also give many additional results. I deeply thank the authors for their work and their ambition to provide the best papers possible. I would also like to thank the referees for their efforts and important comments.

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